AMENDMENTS TO THE CLAIMS

Please amend the claims as set forth below. The status of each claim is shown next to each claim number; current additions are shown by underlines and deletions are shown by strikethrough or double brackets where strikethrough is not readily seen.

1. (Withdrawn)

2. (Withdrawn)

3. (Withdrawn)

4. (Withdrawn)

5. (Withdrawn)

6. (Withdrawn)

7. (Withdrawn)

8. (Withdrawn)

9. (Currently amended) [[A]] An isolated DNA fragment comprising a DNA sequence encoding a *Chondrus crispus* polypeptide ~~in isolated form~~ having hexose oxidase activity, said *Chondrus Crispus* polypeptide comprising ~~at least one amino acid sequence selected from the group consisting of~~

(i) Tyr-Glu-Pro-Tyr-Gly-Gly-Val-Pro (SEQ ID NO:1),

(ii) Ala-Ile-Ile-Asn-Val-Thr-Gly-Leu-Val-Glu-Ser-Gly-Tyr-Asp-X-X-X-Gly-Tyr-X-Val-Ser-Ser (SEQ ID NO:2),

(iii) Asp-Leu-Pro-Met-Ser-Pro-Arg-Gly-Val-Ile-Ala-Ser-Asn-Leu-X-Phe (SEQ ID NO:3),

(iv) Asp-Ser-Glu-Gly-Asn-Asp-Gly-Glu-Leu-Phe-X-Ala-His-Thr (SEQ ID NO:4),

(v) Tyr-Tyr-Phe-Lys (SEQ ID NO:5),

(vi) Asp-Pro-Gly-Tyr-Ile-Val-Ile-Asp-Val-Asn-Ala-Gly-Thr-X-Asp (SEQ ID NO:6), and

(vii) X-Ile-Arg-Asp-Phe-Tyr-Glu-Glu-Met (SEQ ID NO:8),

where X represents an amino acid selected from the group consisting of Ala, Arg, Asn, Asp, [[Asx,]] Cys, Gln, Glu, [[Glx,]] Gly, His, Ile, Leu, Lys, Met, Phe, Pro, Ser, Thr, Trp, Tyr and Val.

10. (Currently amended) [[A polypeptide]] An isolated DNA fragment according to claim 9 comprising the hexose oxidase (HOX) coding region of sequence (SEQ ID No: 30) ~~which is produced according to the method of claim 1~~.

11. (Currently amended) [[A polypeptide]] A microbial cell comprising an isolated DNA fragment according to claim 9, said microbial cell being ~~which is produced by a microbial cell~~ selected from the group consisting of a bacterial cell, a fungal cell and a yeast cell.

12. (Currently amended) [[A polypeptide]] A microbial cell comprising an isolated DNA fragment according to claim 11, said microbial cell being ~~which is produce by a cell~~ selected from the group consisting of an *E. coli* cell, a *Saccharomyces cerevisiae* cell and a *Pichia pastoris* cell.

13. (Currently amended) A polypeptide encoded by an isolated DNA fragment according to claim 9 [[which]] where the polypeptide encoded by the isolated DNA fragment is in a substantially non-glycosylated form.

14. (Canceled)

15. (Canceled)

16. (Canceled)

17. (Canceled)

18. (Currently amended) [[A polypeptide]] An isolated DNA fragment according to claim 9 [[which]] where the polypeptide encoded by the isolated DNA fragment oxidizes at least one sugar selected from the group consisting of D-glucose, D-galactose, maltose, cellobiose, lactose, D-mannose, D-fucose and D-xylose.

19. (Canceled)

20. (Canceled)

21. (Canceled)

22. (Currently amended) [[A polypeptide]] An isolated DNA fragment according to claim 9 [[which]] where the polypeptide encoded by the isolated DNA fragment is in a substantially purified form.

23. (Canceled)

24. (Canceled)

25. (Currently amended) A nucleic acid sequence encoding a fusion polypeptide ~~according to claim 9 which is part of a fusion product~~ comprising additional enzymatically active amino acid sequences.

26 (Withdrawn)

27. (Withdrawn)

28. (Withdrawn)

29. (Withdrawn)

30. (Withdrawn)

31. (Withdrawn)

32. (Currently Amended) A method of manufacturing a food product utilizing a hexose oxidase (HOX) encoded by [[wherein a polypeptide]] an isolated DNA fragment according to claim 9[[is used]].

33. (Original) A method according to claim 32 wherein the food product is selected form the group consisting of a dairy product, a starch-containing product and a non-dairy product.

34. (Original) A method according to claim 32 wherein the polypeptide is acting as an antimicrobial agent or as an antioxidant.

35. (Original) A method according to claim 32 wherein the polypeptide is acting as an oxygen removing agent in a food packaging.

36. (Withdrawn)

37. (Withdrawn)

38. (Withdrawn)

39. (Withdrawn)

40. (Withdrawn)

41. (Withdrawn)

42. (Withdrawn)

43. (Withdrawn)

44. (Withdrawn)

45. (Currently amended) A [[substance]] composition comprising:

a *Chondrus crispus* polypeptide encoded by the isolated DNA fragment of claim 9 ~~having hexose oxidase activity, said polypeptide being characterized by a band at 29 kD or 40 kD as determined by Sodium Dodecyl Sulphate-Polyacrylamide Gel Electrophoresis (SDS-PAGE).~~

46. (Currently amended) The [[substance]] composition of claim 45, wherein the polypeptide is in substantially pure form.

47. (Canceled)

48. (Canceled)

49. (Canceled)

50. (Currently amended) A [[substance]] composition comprising the hexose oxidase (HOX) coding region of sequence (SEQ ID NO: 30) according to claim [[45]] 10,

~~wherein the polypeptide comprises at least one amino acid sequence selected from the group consisting of~~

~~(i) Tyr-Glu-Pro-Tyr-Gly-Gly-Val-Pro (SEQ ID NO:1),~~

~~(ii) Ala-Ile-Ile-Asn-Val-Thr-Gly-Leu-Val-Glu-Ser-Gly-Tyr-Asp-X-X-X-Gly-Tyr-X-Val-Ser-Ser (SEQ ID NO:2),~~

~~(iii) Asp-Leu-Pro-Met-Ser-Pro-Arg-Gly-Val-Ile-Ala-Ser-Asn-Leu-X-Phe (SEQ ID NO:3),~~

~~(iv) Asp-Ser-Glu-Gly-Asn-Asp-Gly-Glu-Leu-Phe-X-Ala-His-Thr (SEQ ID NO:4),~~

~~(v) Tyr-Tyr-Phe-Lys (SEQ ID NO:5),~~

~~(vi) Asp-Pro-Gly-Tyr-Ile-Val-Ile-Asp-Val-Asn-Ala-Gly-Thr-X-Asp (SEQ ID NO:6),~~

~~(vii) X-Ile-Arg-Asp-Phe-Tyr-Glu-Glu-Met (SEQ ID NO:8),~~

~~wherein X represents an amino acid selected from the group consisting of Ala, Arg, Asn, Asp, [Asx,] Cys, Gln, Glu, [Glx,] Gly, His, Ile, Leu, Lys, Met, Phe, Pro, Ser, Thr, Trp, Tyr and Val.~~

51. (Currently amended) [A substance according to claim 45, wherein the polypeptide is produced according to a] A method of producing a polypeptide having hexose oxidase activity, comprising isolating or synthesizing a DNA fragment according to claim 9 encoding the polypeptide, introducing said DNA fragment into an appropriate host organism in which the DNA fragment is combined with an appropriate expression signal for the DNA fragment, cultivating the host organism

under conditions leading to expressing of the hexose oxidase active polypeptide and recovering the polypeptide from the cultivation medium or from the host organism.

52. (Currently amended) A [substance] method according to claim [45] 51, wherein the polypeptide is produced by a microbial cell selected from the group consisting of a bacterial cell, a fungal cell and a yeast cell.

53. (Currently amended) A [substance] method according to claim 52, wherein the polypeptide is produced by a cell selected from the group consisting of an *E. coli* cell, a *Saccharomyces cerevisiae* cell and a *Pichia pastoris* cell.

54. (Currently amended) A [substance] composition according to claim 45, wherein the polypeptide is in a substantially non-glycosylated form.

55. (Canceled)

56. (Canceled)

57. (Canceled)

58. (Currently amended) A [substance] composition according to claim 45, wherein the polypeptide oxidizes at least one sugar selected from the group consisting of D-glucose, D-galactose, maltose, cellobiose, lactose, D-mannose, D-fucose and D-xylose.

59. (Canceled)

60. (Canceled)

61. (Canceled)

62. (Currently amended) A [substance] composition according to claim 45, wherein the polypeptide is in a substantially purified form.

63. (Canceled)

64. (Canceled)

65. (Currently amended) A [substance] composition according to claim 45, ~~wherein the polypeptide is part of a fusion product~~ comprising additional enzymatically active amino acid sequences.

66. (Currently amended) A method of manufacturing a food product, wherein [a polypeptide] an isolated DNA fragment according to claim [45] 9 is used.

67. (Previously Presented) A method according to claim 66, wherein the food product is selected from the group of a dairy product, a starch-containing food product and a non-dairy beverage.

68. (Currently Amended) A method according to claim 66, wherein the polypeptide encoded by the isolated DNA fragment is acting as an antimicrobial agent or as an antioxidant.

69. (Currently Amended) A method according to claim 66, wherein the polypeptide encoded by the isolated DNA fragment is acting as an oxygen removing agent in a food packaging.

70. (Withdrawn)

71. (Withdrawn)

72. (Withdrawn)

73. (Withdrawn)

74. (Withdrawn)

75. (Withdrawn)

76. (Withdrawn)

77. (Withdrawn)

78. (Withdrawn)

79. (Withdrawn)

80. (Withdrawn)

81. (Withdrawn)

82. (Withdrawn)

83. (Currently amended) A [substance] composition according to claim 45, wherein the polypeptide comprises the amino acid sequence of SEQ ID NO:31.

84. (Previously presented) A polypeptide having hexose oxidase activity comprising the amino acid sequence of SEQ ID NO:31.